DAILY FIELD ACTIVITIES SUMMARY REPORT			
PROJECT NAME: Arkwood, Inc., Superfund Site, Omaha, Arkansas			
Date: 11/17/14	Shift Beginning: 12:00		Shift Ending: 15:00
RAC II Contract No.: EP-W-06-004			Task Order No.: 0100
EPA Region 6 TOM: Stephen Tzhone			Project Manager: Ted Telisak
Design Manager: N/A			Site Scientist: Jay Snyder
Design Engineer: N/A			Site Engineer: N/A
Personnel on site	**Name**	**Affiliation**	**Reason for being on site**
EA:	Jay Snyder	EA	Dye Injection Oversight
USEPA	Stephen Tzhone	EPA	Dye Injection Oversight
PRP	Jean Mescher	McKesson	Site Management
Other:	Jim Fleer	Oxford Environmental	Dye Injection Logistics
Other:	Mike Armstrong	Yont to Fix It	Dye Injection Logistics
Other:	Thomas Aley	Ozark U.L.	Lead dye hydrologist
Other:	Shiloh Beeman	Ozark U.L.	Dye hydrologist
ADEQ	Mark Moix	ADEQ	State Oversight
ADEQ	Grant Keneebone	ADEQ	State Oversight

Work Performed

Ozark Underground Laboratories on site to inject fluorescein dye in Well A, rhodamine WT in well B. Dyes were introduced from 13:05 to 13:12, B first then A. Well B received 4 pounds of rhodamine WT premixed in two 1 liter containers. Well A received 2 lbs fluorescein premixed with 10 liters water in car boy. At 13:18 chase water was turned on from treatment plant. Thomas Aley reported 12-13 gallons per minute (gpm) was being discharged roughly evenly to both wells, or 6 to 6.5 gpm/well. The group then went down to New Cricket Spring to observe the ISCO automated samplers and carbon sampler placed in spring mouth. Group then walked water course down to Cricket Spring and small pond. Observed two carbon samplers placed at outfall of pond in culvert discharge. Jean pointed out carbon samplers would be placed in Cricket Spring. The group then returned to plant to review locations of samplers in Walnut Creek on a topographic map. Discussion lead by Thomas Aley. Following Walnut Creek sampler discussion, we observed head of ravine that leads down into Walnut Creek and railroad tunnel portal on south. We returned to plant, discussed when chase water discharge would be complete, and ended days activities.

Anticipated Activities for the Following Day

Chase water discharge will be shut off in morning.

Report prepared by (name and date)

Jay Snyder, P.G. 11/17/14

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PHOTOS

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Introducing Fluorescein dye in Well A from car boy.

Washing Rhodamine WT dye off funnel after discharging dye into Well B.

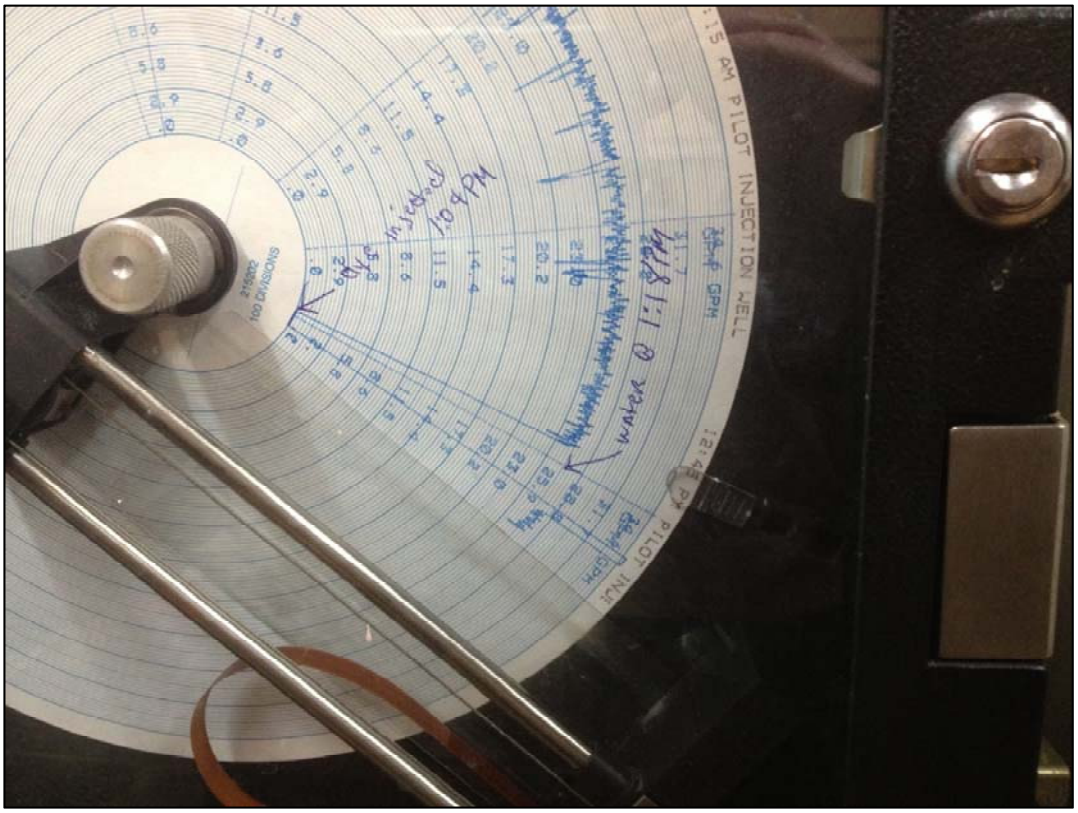

Chart recorder in on-site treatment plant building with dye injection time mark and chase water time mark.


Well A post injection and all waste, containers, funnel etc. secured in waste bags to prevent surface contamination of dye.

New Cricket Spring discharge on day of dye injection.

Automatic ISCO samplers set up at weir for sampling post dye injection, New Cricket Spring.

Shiloh Beeman of Ozark Underground Laboratories showing carbon sampler affixed to rock to secure in spring.

Cricket Spring issues from culvert in hillside. Discharge drops from hillside into small pond in foreground, same pond downstream of New Cricket Spring discharge.

Small pond into which New Cricket Spring and Cricket Spring discharge. View upstream toward New Cricket Spring.

Carbon samplers placed in culvert that discharges pond water, downstream of confluence of New Cricket Spring and Cricket Spring in pond.

FIELD NOTES
17 November 2014

11-17-14 Arkwood Dye Test

11:30 Jay Snyder at front gate.
No one present.

11:45 Stephen Tzone on site.

11:50 Ozark Underground on site
Shiloh Beeman, OUL hydrogeol
Mike Armstrong, Tont To Fix It
contractor Oxford.
Thomas Aley, Ozard UL

Shiloh will be collecting the samples weekly.

12:07 Jim Fleer on site

12:24 Mark Moix, Grant Keneebrop
ADEQ onsite.

Injectate
one well 1 lb fluorscenc dye mixture
~ 75% fluorscenc
- 25% facilitates mixing diluent →

other well
4 lb rhodimin WT (water tracing)
- liquid; 20% dye equiv

11-17-14 Arkwood Dye Test

Fluorescere pre mixed ~ 10 L

Rhodamine WT in bottles

Minimum 2,000 gal flush per well.

2 ISCO Samplers set (one backup) in heated shelter set in New Cricket Spring by weir

Injecting in Wells A & B
A - fluorescein
B - Rhodamine WT

12:53 Jean on site. Jean Mescher

13:00 Thomas Aley provided verbal safety / cleanliness briefing to avoid false positives from dye spreading.

11-17-14 Arkwood Dye Test

1:05 Injecting "B" first w/ Rhodamine WT. 4 lb discharged to wells via 2L 1.12 S.G. 2x 1L containers

1:12 Injecting "A". 10 Liters in a carboy premixed.

1:20 Opened water to A & B to chase & flush dye. Flow is gauged on chart recorder in treatment plant. Took photos. Thomas marked injection & flush times on chart. The flow is not metered to each well. Valves at each well are wide open, and even distribution is assumed.

13:35 At new cricket spring. Shiloh briefing on ISCO sampler set up. Photos taken.

4 11-17-14 Ark Wood Dye Test

New Cricket Spring flows ~ 680 when it hits the weir. Presently flowing ~ 2 gpm. Peak new cricket discharge is around 1,200 gpm

2 carbon samplers are placed in culvert downstream of pond that Old Cricket Spring discharges into. Jean said a carbon sampler will be placed up in Old cricket spring.

I requested total chase volume be transmitted tomorrow. Discharge to A & B is 12-13 gpm split evenly according to Thomas. They will discharge chase water all night.

15:00 Off site meeting wrapped up.